

عنوان مقاله:

A New Upper Bound for Free Space Optical Channel Capacity Using a Simple Mathematical Inequality

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نویسندگان:

Arezu Rezazadeh - Department of Electrical Engineering, Ferdowsi University of Mashhad

Ghosheh Abed Hodtani - Department of Electrical Engineering, Ferdowsi University of Mashhad

خلاصه مقاله:

In this paper, by using a simple mathematical inequality, we derive a new upper bound for the capacity of free space optical channel in coherent case. Then, by applying general fading distribution, we obtain an upper bound for mutual information in non-coherent case. Finally, we derive the corresponding optimal input distributions for both coherent and non-coherent cases, compare the results with previous works numerically and illustrate that our results subsume some of previous results in special cases.

کلمات کلیدی:

Mathematical Inequality, Capacity, Upper Bound, Free Space Optical Channel, Optimal Input Distributions

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